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CYPRUS MINERALS AUSTRALIA COMPANY

DISC 268
PROJECT 4-84-1/1**OPEN FILE**

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	DEPT. OF MINES			
REF. No.	9466/85			

PROGRESS REPORT

OCTOBER 1984 TO SEPTEMBER 1985

EL 36/82

CYGNET, TASMANIA

MICROFILMED

DISTRIBUTION

- o Denver
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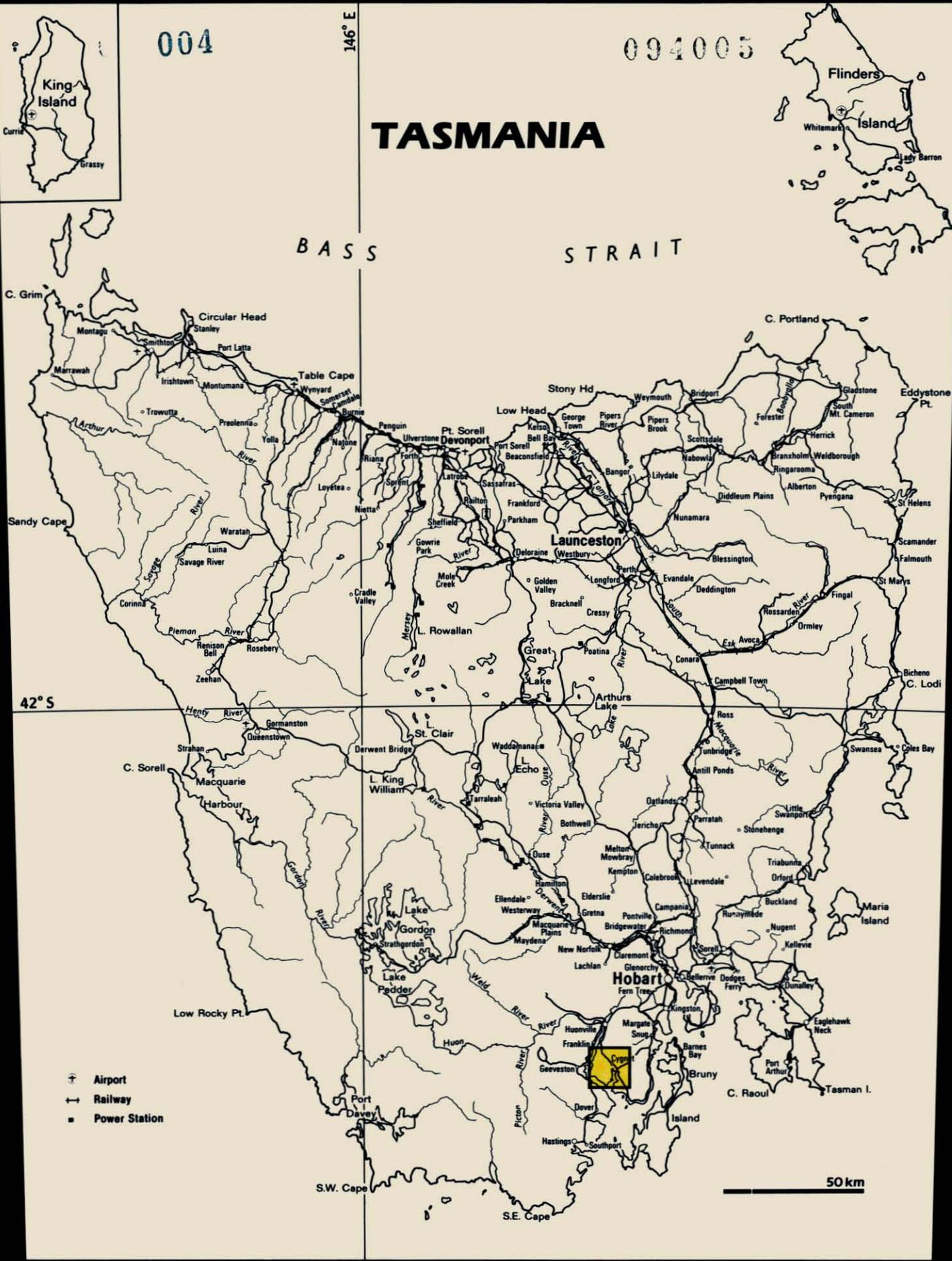
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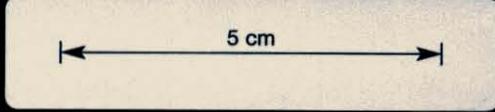
TASMANIA

BASS STRAIT



- ✈ Airport
- 🚂 Railway
- ⬛ Power Station

50 km



Project Location

00 005

SUMMARY AND CONCLUSIONS

The primary exploration target at Cygnet is a replacement style (Carlin type) gold-silver deposit (10 million tonnes of 4.5 g/t) within limey and carbonaceous sediments intruded by alkali porphyries.

The 1984-85 program was designed to achieve a first pass coverage of the 100 square kilometer exploration licence (EL 36/82) utilizing standard stream sediment and panned concentrate techniques.

As experienced by previous workers; in particular BHP, gold values returned proved to be of low tenor. However a number of these low results have been found to be draining areas of workings or extensive loaming pits, necessitating detailed rockchip surveys to be conducted on all low values returned.

Detailed rockchip surveys are to be conducted during 1985-86 followed by gridding, geological mapping, soil sampling and minor geophysical surveys over anomalous areas. Dependant on favorable results a drilling program will be conducted in 1986.

RECOMMENDATIONS

Cyprus should carry out the proposed program of detailed rockchip sampling of anomalous drainage defined from the stream surveys as well as defining targets requiring gridding and more detailed ground surveys.

Dependent upon results all areas should be proved up to the drilling stage for 1986.

EXPLORATION TARGETS

The tenement embraces numerous gold-silver bearing Cretaceous alkaline to felsic porphyries intruding fossiliferous, limey and carbonaceous Permo-Carboniferous marine and glacio-marine sediments. The sediments have excellent potential for hosting a large tonnage, disseminated replacement style (Carlin type) gold-silver deposit (10 million tonnes of 4.5 g/t gold).

Important secondary and tertiary target are

- hydrothermal breccia type gold deposits
- large tonnage low grade disseminated porphyry style deposits

DESCRIPTION OF THE PROPERTY AND OWNERSHIP

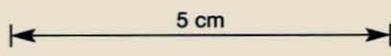
Amoco Minerals Australia Company applied for a 100 square kilometer exploration licence - EL 36/82, embracing potential host rocks for replacement style gold mineralization.

The tenement is bounded on the north by AMG 522400mN, on the east by 510000mE, on the south by 521400mN and on the west by 500000mE (Figure 1 and Enclosure 1).

Numerous objections were forthcoming from the licence application necessitating a Wardens' Court Hearing before the licence was granted on October 26, 1984 for a period of 12 months. The licence is renewable for a further 12 months subject to Mines Department approval.



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094011

FIGURE 1

Cygnet EL 36/82



Pre-existing mining leases occur in the tenement, two of which cover the Mount Mary line of workings, (PM 1059 and PM 1060 - pending) a third covers an area to the south of Mount Mary (986 P/M) and a fourth at Killola Bay (902 P/M) (Enclosure 1). The latter two are stone and mineral leases.

Exploration Licence 36/82 is held solely by Cyprus Minerals Australia Company which was formerly (before June 30, 1985) Amoco Minerals Australia Company.

LOCATION AND ACCESS

The tenement lies approximately 36 kilometers south-southwest of Hobart and is centered on the township of Cygnet. Sealed and gravel all-weather roads transect the property giving reliable access to most areas.

Steep terrain associated with the alkali intrusive porphyries is accessible only by four-wheel drive and foot, however the sediments in general are less steep and are undulating to flat.

No difficulties would be anticipated with respect to power, water and transport should a mine be developed. The area has an annual rainfall of 75-90 centimeters in the lower lying areas and 125 centimeters in the higher areas.

HISTORY AND PREVIOUS EXPLORATION

Around the turn of the century, numerous mines were developed in the Cygnet district and some 3000 ounces of gold were produced to 1902. Early workings concentrated on the richer alluvial deposits and it was not until 1898 that lode mining began on the hornfelsed contact zones between the alkali intrusives and the surrounding flat lying to gently dipping fossiliferous, limey and carbonaceous siltstones, mudstones, tillites and marine limestones. Gold values from the altered sediments averaged from trace to 22 g/t with silver credits, however the very fine grained nature of the gold hindered recoveries and hence further development. Old reports also noted that gold (to 6 g/t), silver and sulfides were present in some altered alkali to acidic intrusives raising the possibility of possible porphyry style gold deposits.

Recent exploration was undertaken in the district by Pechiney in 1971 with a limited stream sediment sampling program being implemented. Minor copper anomalies were defined, one draining from Mt Windsor (275 ppm) and the other at Mount Mary (115 ppm), however no assaying for gold or silver was conducted.

BHP conducted a small orientation program over two gold occurrences at the Mount Mary and Livingstone Mines to ascertain the suitability of the alkali intrusive to host large tonnage low-grade porphyry style gold mineralization. The ground was not pegged and no further work was conducted, however sampling by BHP showed an association of gold with silver, arsenic, copper, lead, zinc and possibly barium.

The Golden Apple Mining Syndicate of Cygnet held the area to 1982 conducting minor gridding, mapping and rudimentary geophysical surveys. No major geochemical work was undertaken, however the Mount Mary Gold Mine was covered by a Mining Lease Application which is currently still pending (MLA's 1059 and 1060, Enclosure 1).

REGIONAL GEOLOGY AND MINERALIZATION

A large block of Permo-Carboniferous lower marine mudstones, sandstones and shales form the relatively horizontal basement complex found throughout southeastern Tasmania. These are disconformably overlain by Triassic fluvio-luic sequences of sandstone, siltstone and mudstone. Doming and faulting of the sediments preceded and accompanied the intrusion of Jurassic dolerites (140-170 million years). Cretaceous Port Cygnet Alkaline Intrusives (100-110 million years) were the final units intruded into the sequence carrying with them gold, silver and minor basemetal values.

The dolerite appears to have been injected as multiple sheets and the alkaline rocks as a laccolithic tongue and dike swam. The alkali intrusive belt is approximately 25 kilometers long by 10

kilometers wide and extends from just south of Snug to Surges Bay on the west bank of the Huon River.

Recent fluviatile and pleistocene glacial erosion have produced the present topography.

GEOLOGY AND MINERALIZATION OF THE PROPERTY

Geological control within the tenement is hampered by poor outcrop and mapping is based on Mines Department photogeological interpretation (Kingsborough 1:50000 Geological Sheet 8311N [88]) coupled with follow-up roadside mapping.

The sedimentary units within the licence range in age from Permian (850 meters thick) to Triassic (450 meters thick). The basal Permian unit is the Truro Tillite which has a thickness in excess of 300 meters. This unit is overlain paraconformably by a sequence of fossiliferous (bryzoa and branchiopods plentiful) marine mudstones and siltstones (Woody Island Siltstone, Bundella Mudstone and Deep Bay Formation) which pass upwards into Upper Permian Risdon Sandstone and sandy silstones of the Abels Bay

Formation. A fault bounded block of Triassic coarse quartz sandstone occurs at Deep Bay in the southeastern portion of the licence.

The sediments form a gently domed sequence centered west of Cygnet with dips of 5-10°. The doming; with associated radial and concentric faulting is due to the intrusion of a large mass of Jurassic dolerite. The vent area for the dolerite also appears to have been the locus for the emplacement of Cretaceous alkali to acid intrusives in the form of sills and numerous dikes. The alkaline rocks intrude Permian sediments and Jurassic dolerite but to date have not been found to intrude Triassic rocks. *Hybrid rocks also occur where Cretaceous intrusives have partially assimilated Jurassic dolerite during emplacement.*

The coincidence of what are apparently unique dome structures - at Cygnet and at nearby Oyster Cove, and the petrologically distinct alkaline intrusives suggests a strong northeast-southwest generative link between the two. This is borne out by the predominance of workings and anomalous gold stream sediment values occurring along a similar trend.

Several small lode and alluvial gold deposits have been worked in the district since 1898. Most of the gold production estimated at 3000 ounces has come from alluvial deposits. The largest of these were at Lymington (Forsters Rivulet) and Wheatlys Bay (Riseleys Creek). Small lodes were prospected by adits and shafts at the Mount Mary and Livingstone mines near Cygnet and prospecting pits were sunk at other localities where pyrite and other sulfides had developed in alkali to felsic intrusives and adjacent sediments (Black Jack Ridge and Kings Hill workings).

The style of mineralization within the sediments is analogous to a replacement type (Carlin style) gold deposit. This premise further enhanced by work conducted by BHP in 1979 which showed a

close association of gold to arsenic, antimony, mercury, barium and sulfur; key elemental associations for Carlin type deposits, during their orientation survey.

A diamond hole drilled along strike to the vein system at the Mount Mary Mine was logged and assayed by Amoco for the Golden Apple Mining Syndicate in order to ascertain the nature and grades of the gold mineralization. Eleven meters of core from 74-85 meters assayed 0.23 g/t gold within a pyritic and epidotized, chloritic pebbly and brecciated mudstone. The sediments are intruded by a thick sequence of altered alkali porphyries which are weakly anomalous in gold; the reef system was not encountered.

WORK CONDUCTED BY AMOCO

Work during the period included a detailed assessment of previous work, preparation of a basemap and the completion of a detailed stream sediment/panned concentrate survey.

A basemap at a scale of 1:25000 was prepared from Lands Department films of the Cygnet and Lymington 1:25000 topographic sheets. This base was necessary for the planning of a regional detailed stream sediment sampling program.

Geochemistry

Where possible both a stream sediment and panned concentrate (one full pan as a standard) were taken at each sample site. Certain sites in hilly to rugged terrain had no sediment available hence only a panned concentrate was taken. A few sample sites were



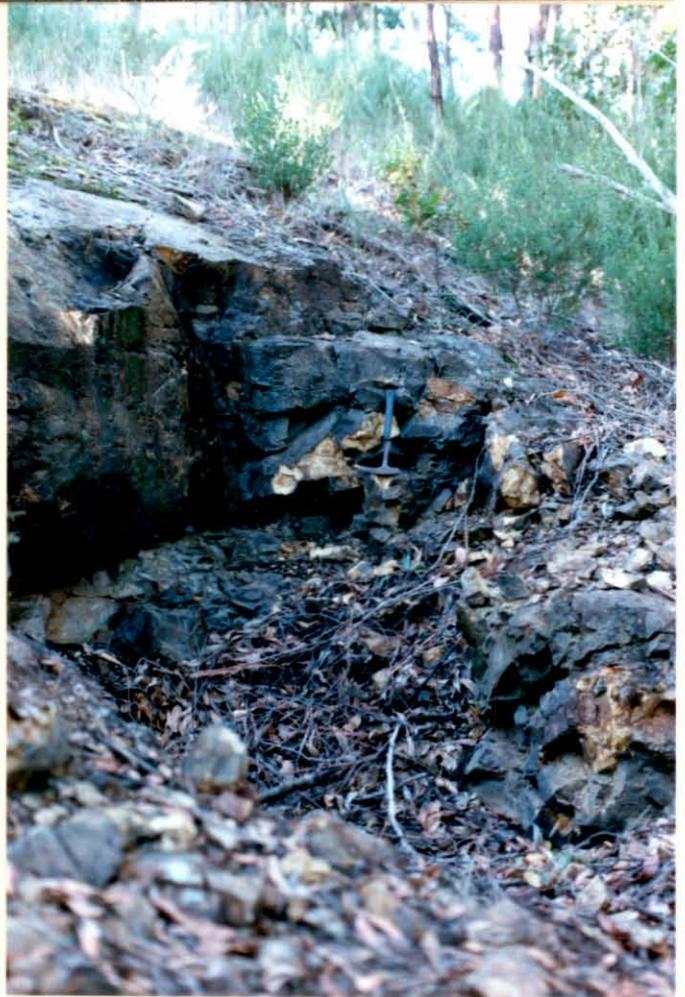
Looking southwest across the town of Cygnet to Mount Mary and the breccia pipe area on Kings Hill.



Tobys Hill panorama. Anomalous gold draining into foreground.



Black Jacks Ridge. Anomalous gold drains into main creek on the right (0.5 g/t pan conc, 0.2 g/t stream sediment).



Main area of intense alteration and minor workings on Black Jacks Ridge.



Forsters Rivulet area, previously the largest alluvial field in the district.



Kubes Road area in the southwest of the tenement showing the main area of alluvial gold draining into Wheatleys Bay.

classed as a 'soil' where cultivation had drastically altered previous stream channels. Sample depths ranged from one to two meters in these cases.

All samples were despatched to Analabs in Cooee, Tasmania where they were dried and in the case of the sediments sieved to -80 mesh with the panned concentrates being crushed and pulverized.

All samples were fire assayed for gold using a 50 gram charge with an AAS finish and some were also assayed for silver using standard AAS techniques (Appendix 1).

A total of 305 panned concentrates, stream sediment and 'soil' samples were collected during the regional survey. Sample locations are plotted on Enclosure 2 with anomalous gold results shown on Enclosure 3.

TABLE 1 GEOCHEMICAL SURVEY - SUMMARY OF RESULTS

	No of Samples	Element	Overall Range ppm	Anomalous Samples	Other
Panned Conc	143	Au	0.005-0.77	0.01-0.77(2.0)	BLD-0.005
	(70)	Ag	0.5 -0.12	Background	
Stream Sed	154	Au	0.005-0.12	0.01-0.12(6)	BLD
	-	Ag	n/a	n/a	n/a
'Soil'	8	Au	0.03	0.03(1)	BLD
	-	Ag	n/a	n/a	n/a

BLD - below limit of detection

n/a - not assayed

Very low tenor values for gold (Table 1) were observed in both the panned concentrate and stream sediment samples draining the following areas (Enclosure 3):

- . Tobys Hill
- . Black Jack Ridge
- . Langdons Hill
- . Kings Hill
- . Direens Spur
- . Silver Hills Road - Glaziers Bay

Values of 0.01 to 0.03 have been shown through limited regional mapping to drain areas of minor pitting or extensive loaming. Therefore all values registering greater than 0.01 gram (Enclosure 3) are to be followed-up with detailed rockchip and geological surveys to map out areas requiring gridding and more detailed ground surveys (Enclosure 4).

It should be noted that due to intensive cultivation and/or clearing of land in the tenement, drainage sampling surveys may not have adequately screened the licence for prospective areas to follow-up. Follow-up rockchip sampling surveys may well have to be widened in areal extent to lessen this possibility.

EXPLORATION POTENTIAL

The tenement is considered to have excellent potential for hosting a replacement style (Carlin type) disseminated gold deposit associated with the intrusion of gold anomalous alkali porphyries into limey and carbonaceous mudstones, tillites siltstones and limestones.

There is possibly secondary potential for a large tonnage low grade porphyry style gold deposit as well as possible hydrothermal breccia pipe type gold deposits within the alkali intrusive.

PROPOSED PROGRAM

The proposed program will entail detailed rockchip sampling of anomalous drainage defined from the regional survey and from regional mapping.

Areas of anomalous rockchip values will be gridded, soil sampled ('B' horizon), geologically mapped and surveyed with a magnetometer. Approximately 100 to 150 rockchip samples will be taken prior to conducting detailed ground surveys. As many as possible of the old workings gleaned from the literature will be located, sampled and mapped, as will others discovered during the regional rockchip sampling program. A structural analysis will be conducted to assist in locating particular zones of interest.

Dependent on favorable results, a drilling program will be conducted in 1986.

Signed 
PA JONES *for*

AMOCO MINERALS AUSTRALIA COMPANY

21

EXPENDITURE FOR THE PERIOD ENDED JULY 31, 1985

EXPLORATION LICENCE 36/82

Salaries and Wages	8,947.32
Supplies	2,157.20
Supplies - maps	8.00
Cookery	2,281.71
Field Office Rent	2,060.33
Field Supplies	1,121.23
Freight	1,590.63
Aircraft Charter	-
Travel	324.04
Communications	1,352.12
Geophysics	1,000.00
Consultants/Contractors	15,050.25
Drilling	-
Assays	9,315.12
Legal Fees	65.50
Equipment Rental	78.75
Equipment Operation & Maintenance	1,652.08
Property Payments	1,027.81
Outside Services	<u>952.53</u>
	48,984.62
Overhead @ 10%	<u>4,898.46</u>
	\$ <u>53,883.08</u>



T.J. CONQUEST
ACCOUNTANT 278

APPENDIX 1

STREAM SEDIMENT GEOCHEMISTRY - ANALYTICAL RESULT SHEETS

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ANALABS

A division of MacDonald Hamilton & Co. Pty. Ltd.

Phone (09) 458 7999

52 Murray Road, Welshpool, W.A. 6106

Telex AA92560

ANALYTICAL REPORT No. 999.0 88 3177

THIS REPORT MUST BE READ IN CONJUNCTION WITH THE ACCOMPANYING ANALYTICAL DATA

ORDER No. 15155		PROJECT Cyanet	
DATE RECEIVED 12.7.85		RESULTS REQUIRED ASAP	
Cyprus Minerals P.O. Box 493 North Sydney N.S.W. 2060			
No. OF PAGES OF RESULTS	DATE REPORTED	No. OF COPIES 3	TOTAL No. OF SAMPLES 70

STATE OF SAMPLES	REFR. BELOW	SAMPLE NUMBERS	PRE-TREATMENT						ANALYSIS				
			DRY	CRUSH	SPLIT	PULVERISE	SIEVE	OTHER SEE REMARKS	NONE	REFER TO ANALYSIS SECTION	PREPARATION	METHOD	
	PC	Various	1			2					Ag Au		101 313

RESULTS TO RESULTS TO	As Above Attn: J. Roxburgh	REMARKS Despatch No 2308
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STATE OF SAMPLES	ANALYSIS — PREPARATION	ANALYSIS — METHOD
whole core	perchloric acid A1	atomic absorption AAS
split core	hydrochloric acid A2	x-ray fluorescence XRF
cutting	nitric acid A3	spectrophotometry SPEC
rock	aqua regia A4	colorimetry COL
soil	nitric-perchloric A5	chromatography CHR
pulp	HF mixture A6	titration TTN
water	HF under pressure A7	other chemical means CHEM
tissue	fusion A8	miscellaneous MISC
stream sediment		fluorescence FLUOR
heavy mineral		inductively coupled plasma ICP

D / A

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RH MHP

ANALYTICAL DATA

SAMPLE PREFIX

REPORT NUMBER

REPORT DATE

CLIENT ORDER No.

PAGE

		999.0 08 3177		19.7.85		15155		1 OF 4	
TUBE No.	SAMPLE No.	Ag	Au						
1	152002	X	X						
2	152004	0.5	X						
3	152006	X	X						
4	152008	X	X						
5	152011	0.5	X						
6	152012	0.5	X						
7	152014	X	X						
8	152016	0.5	X						
9	152018	0.5	X						
10	152020	0.5	X						
11	152022	0.5	X						
12	152024	0.5	X						
13	152026	1.0	X						
14	152028	0.5	X						
15	152030	1.5	X						
(152032	1.0	X						
17	152034	1.5	X						
18	152038	1.0	X						
19	152040	1.5	X						
20	152042	1.0	0.05	✓					
21	152044	1.0	X						
22	152046	1.0	X						
23	152048	1.5	0.08	✓					
24	152050	1.0	0.01	✓					
25	152054	1.0	X						

Results in ppm unless otherwise specified

T = element present; but concentration too low to measure

X = element concentration is below detection limit
element not determined

AUTHORISED OFFICER

Rh MHP

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RANAP.

ANALYTICAL DATA

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REPORT NUMBER

REPORT DATE

CLIENT ORDER No.

PAGE

		999.0 08 3177				19.7.85		15155		2 OF 4	
TUBE No.	SAMPLE No.	Ag	Au								
1	152059	0.5	0.10	✓							
2	152063	0.5	0.01	✓							
3	152067	1.0	0.025	✓							
4	152068	0.5	X								
5	152071	X	X								
6	152081	1.0	0.03	✓							
7	152082	0.5	X								
8	152085	X	X								
9	152087	0.5	0.77	✓							
10	152089	0.5	X								
11	152091	0.5	0.13	✓							
12	152096	1.5	X								
13	152099	1.0	X								
14	152102	X	0.07	✓							
15	152104	1.0	X								
(152106	1.0	X								
17	152108	1.0	X								
18	152110	1.0	X								
19	152112	0.5	X								
20	152114	0.5	X								
21	152116	0.5	X								
22	152118	0.5	X								
23	152120	1.0	X								
24	152122	1.0	X								
25	152124	1.0	X								

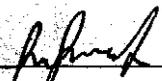
Results in ppm unless otherwise specified

T = element present; but concentration too low to measure

X = element concentration is below detection limit

- = element not determined

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REPORT NUMBER

REPORT DATE

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19.7.85

15155

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TUBE No.	SAMPLE No.	Ag	Au						
1	152126	1.0	0.005	✓					
2	152128	0.5	X						
3	152130	1.5	X						
4	152132	1.0	X						
5	152134	0.5	0.01	✓					
6	152137	0.5	X						
7	152139	1.0	0.025	✓					
8	152141	1.0	0.005	✓					
9	152143	1.0	X						
10	152145	X	X						
11	152147	1.0	0.005	✓					
12	152149	2.0	X						
13	152151	1.0	0.03	✓					
14	152154	0.5	X						
15	150935	1.0	X						
(150943	1.5	X						
17	150980	1.0	X						
18	150985	1.0	X						
19	150986	1.0	X						
20	150996	1.0	X						
21									
22									
23									
24									
25									

Results in ppm unless otherwise specified

T = element present; but concentration too low to measure

X = element concentration is below detection limit

— = element not determined

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R. M. ...

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REPORT NUMBER

REPORT DATE

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19.7.85

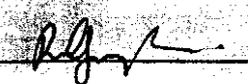
15155

4 OF 4

TUBE No.	SAMPLE No.	Ag	Au						
1	STD 3036	3.5							
2	RPT 152002	0.5							
3	RPT 152042	0.5							
4	STD 3036	3.5							
5	RPT 152100	0.5							
6	RPT 152145	X							
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23	DETECTION	0.5	0.005						
24	DIGESTION								
25	METHOD	101	313						

Results in ppm unless otherwise specified
 T = element present; but concentration too low to measure
 X = element concentration is below detection limit
 — = element not determined

AUTHORISED OFFICER



ANALABS

A Division of MacDonald Hamilton & Co. Pty. Ltd.

Phone (09) 458 7999

52 Murray Road, Welshpool, W.A. 6106

Telex AA92560

ANALYTICAL REPORT No. 4.5 08 3042

THIS REPORT MUST BE READ IN CONJUNCTION WITH THE ACCOMPANYING ANALYTICAL DATA

Amoco Minerals Australia Coy
PO Box 949
North Sydney
N.S.W. 2060

ORDER No. E 14726	PROJECT A84-1110/B
DATE RECEIVED 23.4.85	RESULTS REQUIRED ASAP

No. OF PAGES OF RESULTS	DATE REPORTED	No. OF COPIES 3	TOTAL No. OF SAMPLES 69	CYGNET
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STATE OF SAMPLES	REFER BELOW	SAMPLE NUMBERS	PRE-TREATMENT						ANALYSIS				
			DRY	CRUSH	SPLIT	PUL-VERISE	SIEVE	OTHER SEE REMARKS	NONE	REFER TO ANALYSIS SECTION	PREPARATION	METHOD	
PC		113864-900 150910-995 152036-093 152501-530 Not Continuous	1		3	2					Au		309
SO		150117	1		3	2							
RC		150118-121	1	2	3	4							

RESULTS TO

1. Amoco Minerals,
PO Box 493
North Sydney NSW 2060
Att. B. Roxburgh

RESULTS TO

2. Copy of results and invoice to
Amoco Minerals
61 Counsel Street
Zeehan TAS 7469
Att. G.L. Kery

REMARKS

Despatch No. 2302

STATE OF SAMPLES	ANALYSIS — PREPARATION	ANALYSIS — METHOD
whole core WC	perchloric acid A1	atomic absorption AAS
split core SC	hydrochloric acid A2	x-ray fluorescence XRF
cutting CU	nitric acid A3	spectrophotometry SPEC
rock Ro	aqua regia A4	colorimetry COL
soil SO	nitric-perchloric A5	chromatography CHR
pulp PU	HF mixture A6	titration TTN
water WA	HF under pressure A7	other chemicals means CHEM
tissue TI	fusion A8	miscellaneous MISC
stream sediment SS		fluorescence FLUOR
heavy mineral HM		inductively coupled plasma ICP

037

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ANALYTICAL DATA

SAMPLE PREFIX

REPORT NUMBER

REPORT DATE

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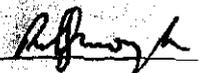
			4.5 88 3042	30.4.85	E 14726	1 OF 3	
TUBE No.	SAMPLE No.	Flu					
1	113864	X					
2	113866	X					
3	113868	X					
4	113871	X					
5	113873	0.03	/				
6	113875	X					
7	113876	X					
8	113878	X					
9	113880	X					
10	113882	X					
11	113884	X					
12	113886	X					
13	113888	X					
14	113890	X					
15	113892	X					
16	113894	X					
17	113896	X					
18	113898	X					
19	113900	X					
20	150117	1.32	Std. Hungary				
21	150118	X					
22	150119	X					
23	150120	X					
24	150121	X					
25	150910	X					

Results in ppm unless otherwise specified

T = element present; but concentration too low to measure

X = element concentration is below detection limit

element not determined

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ANALYTICAL DATA

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REPORT NUMBER

REPORT DATE

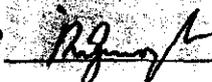
CLIENT ORDER No.

PAGE

			4.5 08 3042	30.4.85	E 14726	2 OF 3	
TUBE No.	SAMPLE No.	RU					
1	150911	X					
2	150913	X					
3	150914	X					
4	150915	0.005	✓				
5	150916	X					
6	150917	X					
7	150918	X					
8	150920	X					
9	150922	X					
10	150924	0.02	✓				
11	150926	X					
12	150927	X					
13	150929	X					
14	150931	X					
15	150933	0.02	✓				
16	150937	0.01	✓				
17	150939	X					
18	150941	X					
19	150945	X					
20	150947	X					
21	150949	X					
22	150987	X					
23	150995	X					
24	152036	X					
25	152051	X					

Results in ppm unless otherwise specified
 T = element present; but concentration too low to measure
 X = element concentration is below detection limit
 element not determined

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ANALYTICAL DATA

SAMPLE PREFIX

REPORT NUMBER

REPORT DATE

CLIENT ORDER No.

PAGE

4.5 08 3042

30.4.85

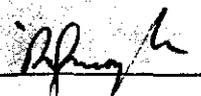
E 14726

3 OF 3

TUBE No.	SAMPLE No.	RU								
1	152056	X								
2	152077	0.55	✓							
3	152079	0.005	✓							
4	152093	X								
5	152501	X								
6	152503	0.135	✓							
7	152505	X								
8	152507	X								
9	152509	X								
10	152512	X								
11	152514	X								
12	152516	X								
13	152518	X								
14	152520	0.01	✓							
15	152522	X								
16	152524	X								
17	152526	X								
18	152528	X								
19	152530	X								
20										
21										
22										
23	DETECTION	0.005								
24	DIGESTION									
25	METHOD	313								

Results in ppm unless otherwise specified
 T = element present; but concentration too low to measure
 X = element concentration is below detection limit
 — = element not determined

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094041

Phone (09) 458 7999

A division of MacDonald Hamilton & Co. Pty. Ltd.
52 Murray Road, Welshpool, W.A. 6106

23 APR 1985

Telex AA92560

ANALYTICAL REPORT No. 4.5 08 3019

THIS REPORT MUST BE READ IN CONJUNCTION WITH THE ACCOMPANYING ANALYTICAL DATA

Amoco Minerals Australia Coy
PO Box 949
North Sydney
N.S.W. 2060

ORDER No.

PROJECT

14717

84/1110

DATE RECEIVED

RESULTS REQUIRED

3.4.85

ASAP

No. OF PAGES
OF RESULTSDATE
REPORTEDNo.
OF COPIES

TOTAL No. OF SAMPLES

3

152

CYGNET

STATE OF SAMPLES	REFER BELOW	SAMPLE NUMBERS	PRE-TREATMENT						ANALYSIS				
			DRY	CRUSH	SPLIT	PUL- VERISE	SIEVE	OTHER SEE REMARKS	NONE	REFER TO ANALYSIS SECTION	PREPARATION	METHOD	
	SS	113865-889 150912-950 150979-1000 152053-115 152117-155 152502-531	1			3	2				Flu		313

RESULTS

TO

B. Roxburgh
As Above

RESULTS

TO

P. Jones
61 Counsel St
Zeehan

REMARKS

DESPATCH NO 2301

STATE OF SAMPLES	ANALYSIS — PREPARATION				ANALYSIS — METHOD		
whole core	WC	perchloric acid	A1	cold acid	CA	atomic absorption	AAS
split core	SC	hydrochloric acid	A2	specific sulphide	SS	x-ray fluorescence	XRF
cutting	CU	nitric acid	A3	other mixed acids	Ma	spectrophotometry	SPEC
rock	Ro	aqua regia	A4	alkaline attack	AA	colorimetry	COL
soil	SO	nitric-perchloric	A5	volatilization	VO	chromatography	CHR
pulp	PU	HF mixture	A6	ignition	IG	titration	TTN
water	WA	HF under pressure	A7	pressed powder (XRF)	PP	other chemicals means	CHEM
tissue	TI	fusion	A8	glass fusion (XRF)	GF	miscellaneous	MISC
stream sediment	SS					fluorescence	FLUOR
heavy mineral	HM					inductively coupled plasma	ICP

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[Signature]

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ANALYTICAL DATA

SAMPLE PREFIX

REPORT NUMBER

REPORT DATE

CLIENT ORDER No.

PAGE

			4.5 08 3019	16.4.85	14717	1 OF 7	
TUBE No.	SAMPLE No.	Flu	DATA PREC NO				
1	113865	X	21357				
2	113867	X	21358				
3	113869	X	59				
4	113870	X	60				
5	113872	X	61				
6	113874	X	62				
7	113877	X	63				
8	113879	X	64				
9	113881	X	65				
10	113883	X	21366				
11	113885	X	66				
12	113887	X	21367				
13	113889	X	68				
14	113891	X	69				
15	113893	X	70				
16	113895	X	71				
17	113897	X	72				
18	113899	X	21373				
19	150912	0.01	21375				
20	150913B	X	73				
21	150915B	X	74				
22	150919	X	75 21376				
23	150921	X	76 21377				
24	150923	X	21378				
25	150925	X	21379				

Results in ppm unless otherwise specified
 T = element present; but concentration too low to measure
 X = element concentration is below detection limit
 element not determined

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R. Singh

042

094043

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SAMPLE PREFIX

REPORT NUMBER

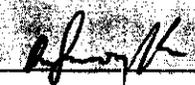
REPORT DATE

CLIENT ORDER No.

PAGE

			4.5 08 3019	16.4.85	14717	2 OF 7	
TUBE No.	SAMPLE No.	Au					
1	150928	X	21360				
2	150930	X	21381				
3	150932	X	21382				
4	150934	X	21383				
5	150936	X	4				
6	150938	X	5				
7	150940	X	6				
8	150942	X	7				
9	150944	X	8				
10	150946	X	9				
11	150948	X	21390				
12	150950	X	1				
13	150979	X	2				
14	150980B	X	3				
15	150981	0.02	21394				
16	150982	X	3				
17	150983	X	6				
18	150984	X	7				
19	150986b	X	8				
20	150988	X	21391 21400				
21	150989	X	21 21400				
22	150990	X	21402				
23	150991	X	3				
24	150992	X	4				
25	150993	X	21405				

Results in ppm unless otherwise specified
 T = element present; but concentration too low to measure
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 element not determined

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SAMPLE PREFIX

REPORT NUMBER

REPORT DATE

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PAGE

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16.4.85

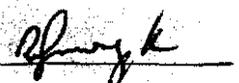
14717

3 OF 7

TUBE No.	SAMPLE No.	RU							
1	150994	X	21						
2	150997	X	21407						
3	150998	X	2						
4	151000	X	21408						
5	152001	X							
6	152003 ✓	X	21410						
7	152005 ✓	X	21411						
8	152007 ✓	X	21412						
9	152009 ✓	X	21413						
10	152010	X							
11	152013	X	21415						
12	152015	X	16						
13	152017	X	17						
14	152019	X	18						
15	152021	X	19						
16	152023	X	20						
17	152025	X	21						
18	152027	X	22						
19	152029	X	23						
20	152031	X	24						
21	152033	X	25						
22	152035	X	26						
23	152037	X	27						
24	152039	X	28						
25	152041	X	21429						

Results in ppm unless otherwise specified
 T = element present; but concentration too low to measure
 X = element concentration is below detection limit
 — = element not determined

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ANALYTICAL DATA

SAMPLE PREFIX

REPORT NUMBER

REPORT DATE

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PAGE

			4.5 08 3019		16.4.85		14717		4 OF 7	
TUBE No.	SAMPLE No.	Ru								
1	152043	X	21430							
2	152045	X	31							
3	152047	X	32							
4	152049	X	33							
5	152052	X	34							
6	152053	X	21435							
7	152055	X	35 1	21504						
8	152057	X	36 21436							
9	152058	X	37 37							
10	152060	X	38 38							
11	152064	X	39 39							
12	152065	X	21440							
13	152066	X	41							
14	152069	X	42							
15	152070	X	43							
16	152072	X	43							
17	152073	X	44							
18	152074	X	45							
19	152075	0.03	46 45							
20	152076	X	47							
21	152078	0.12	48 46							
22	152083	X		47						
23	152084	0.03		48						
24	152086	0.04		49						
25	152088	X		21450						

Results in ppm unless otherwise specified
 T = element present; but concentration too low to measure
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 - = element not determined

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045

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ANALYTICAL DATA

SAMPLE PREFIX

REPORT NUMBER

REPORT DATE

CLIENT ORDER No.

PAGE

			4.5 08 3019	16.4.85	14717	5 OF 7		
TUBE No.	SAMPLE No.	RU						
1	152090	X	21451					
2	152092	X	52					
3	152094	X	53					
4	152095	X	54					
5	152097	X	54					
6	152098	X	55					
7	152100	X	21456					
8	152101	X	21501					
9	152103	X	21502					
10	152105	X	21457					
11	152107	X	58					
12	152109	X	59					
13	152111	X	60					
14	152113	X	61					
15	152115	X	62					
16	152117	X	63					
17	152119	X	64					
18	152121	X	65					
19	152123	X	66					
20	152125	X	67					
21	152127	X	68					
22	152129	X	69					
23	152131	X	70					
24	152133	X	71					
25	152135	X	21472					

Results in ppm unless otherwise specified
 T = element present; but concentration too low to measure
 X = element concentration is below detection limit
 - = element not determined

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SAMPLE PREFIX

REPORT NUMBER

REPORT DATE

CLIENT ORDER No.

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16.4.85

14717

6 OF 7

TUBE No.	SAMPLE No.	Flu							
1	152136	X	21473						
2	152138	X	74						
3	152140	X	75						
4	152142	X	76						
5	152144	X	77						
6	152146	X	78						
7	152148	X	79						
8	152150	X	80						
9	152152	X	81						
10	152153	X	82						
11	152155	X	83						
12	152502	X	84 86						
13	152504	X	85 87						
14	152506	X	86 88						
15	152508	X	87 89						
16	152510	X	88 90						
17	152511	X	89 91						
18	152513	X	91						
19	152515	X	92						
20	152517	X	93						
21	152519	X	94						
22	152521	X	95						
23	152523	X	96						
24	152525	X	97						
25	152527	X	21496						

Results in ppm unless otherwise specified
 X = element present, but concentration too low to measure
 - = element concentration is below detection limit
 * = element not determined

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14717

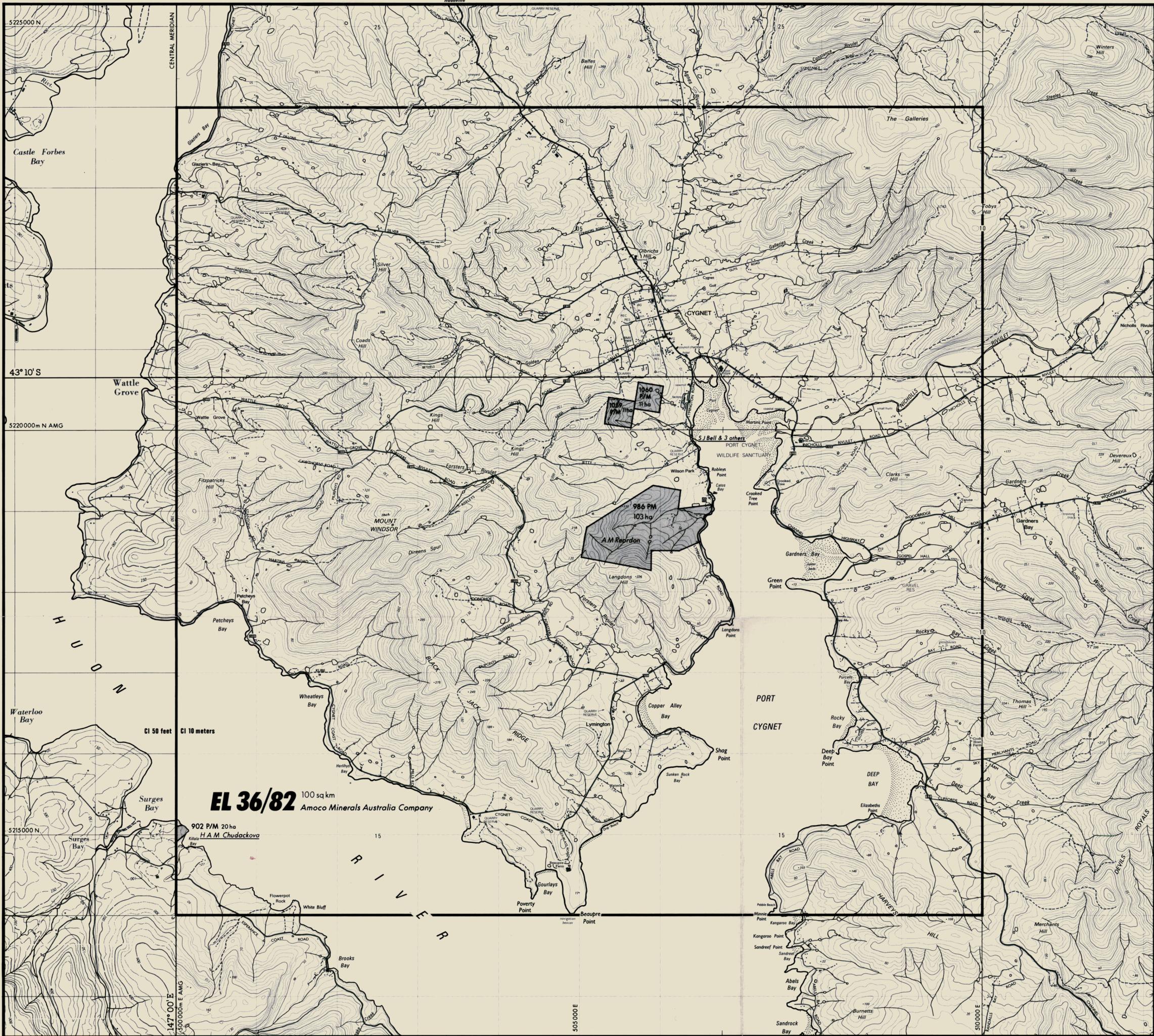
7 OF 7

TUBE No.	SAMPLE No.	Flu								
1	152529	X	21499							
2	152531	X	21500							
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23	DETECTION	0.005								
24	DIGESTION									
25	METHOD	313								

Results in ppm unless otherwise specified
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 - = element concentration is below detection limit
 . = element not determined

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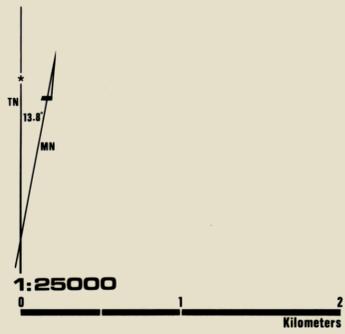


EL 36/82 100 sq km
Amoco Minerals Australia Company

902 P/M 20 ha
H.A.M. Chudackova

1060 P/M
11 ha

986 P/M
103 ha
A.M. Repardon



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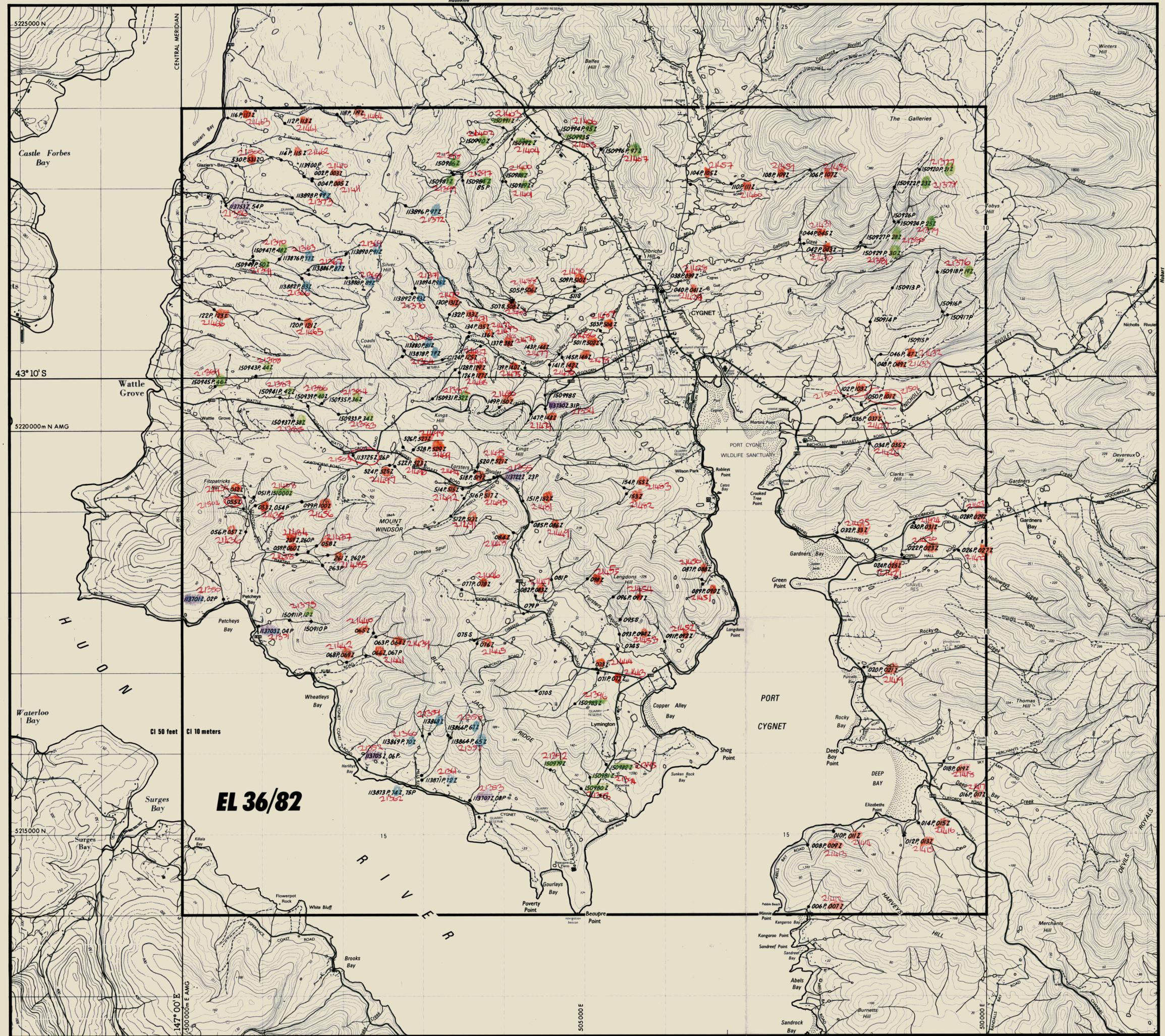


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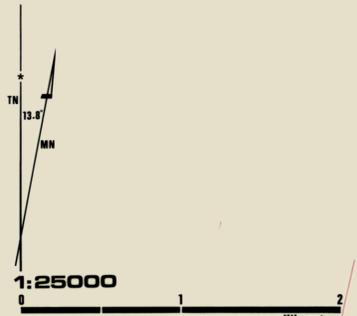
094049



Project	HEEMSKIRK	Nº	A-84-111
Project Partner			
	Cygnet EL 36/82		85-2481
REGIONAL BASEMAP AND TENEMENT STATUS			
Map Ref. ANG	K-55-8	Latitude	43° 10' S
		Longitude	147° 00' E
Surveyed	Amoco	Date	1985
		Scale	1:25000
Drawn	S. Fowler	Date	1985
		Drawing Nº	M85-2299
Report	459		



EL 36/82



Notes

3 digit sample numbers have 152... prefix omitted

Stream sediment sample 150982Z

Rockchip sample 150982Z

Float sample 150982Z

P - panned concentrate; Z - stream sediment;
S - soil (from creek bed)

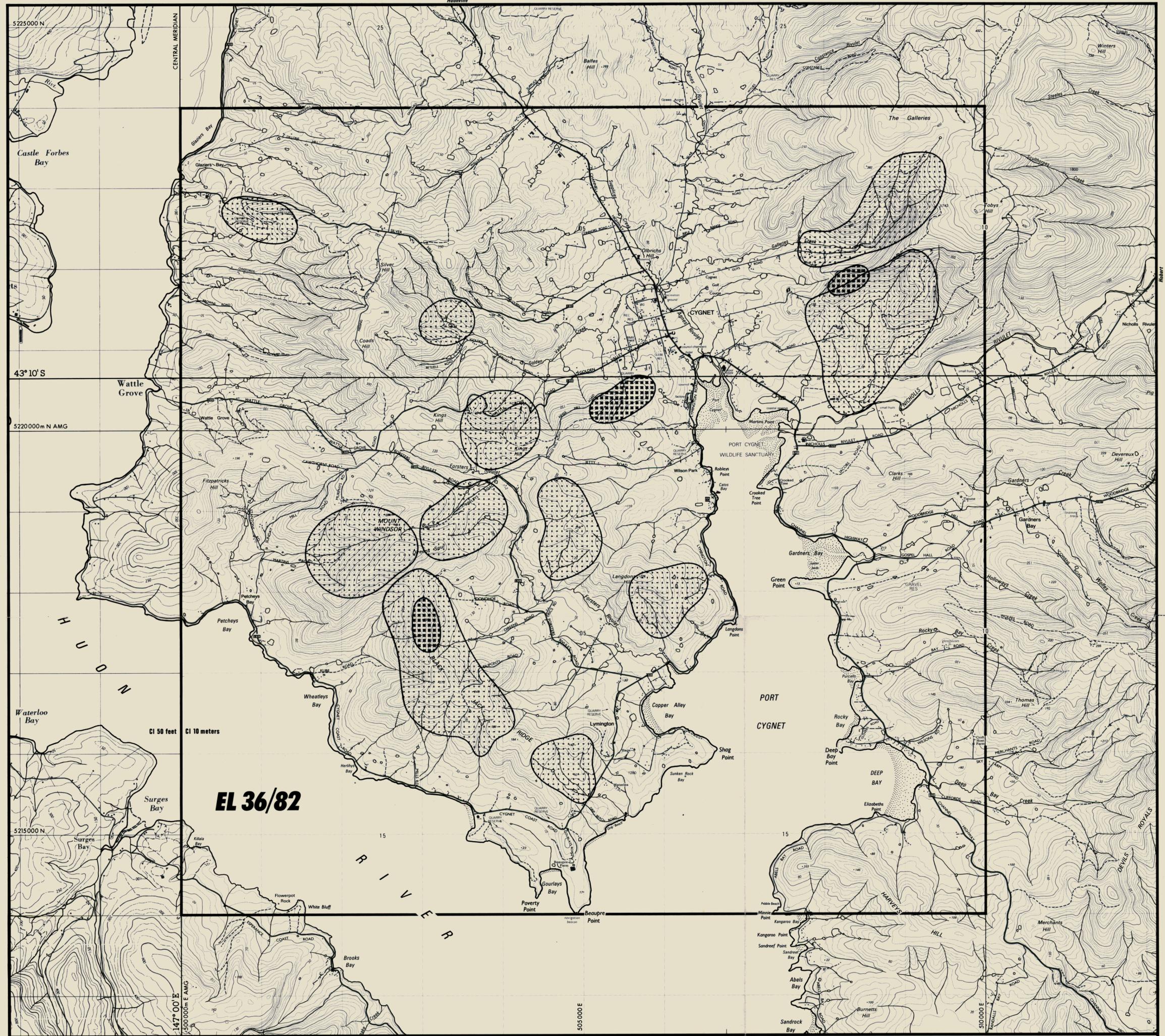
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Amoco Minerals Australia Company

Project	HEEMSKIRK	Nº	A-84-111
Project Partner	Cygnet EL 36/82 85-2481		
STREAM SEDIMENT GEOCHEMISTRY SAMPLE LOCATIONS			
Map Ref. ANG	K-55-8	Latitude	43°10'S Longitude 147°00'E
Surveyed	Amoco	Date	1985 Scale 1:25000
Drawn	S. Fowler	Date	1985 Drawing Nº M85-2300
Report 459			

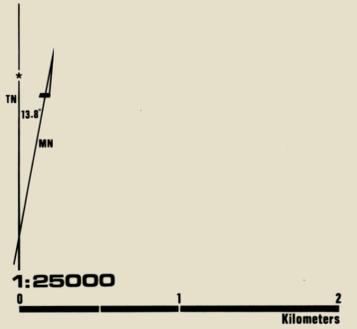


EL 36/82

CI 50 feet CI 10 meters



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sheet acquired from the Tasmanian Lands Department



Notes

- Area of anomalous stream geochemistry requiring detail follow-up
- Area of old workings requiring detail work

094052



Amoco Minerals Australia Company

Project	HEEMSKIRK	Nº	A-84-111
Project Partner	Cygnet EL 36/82 85-2481		
AREAS FOR DETAIL FOLLOW-UP			
Map Ref. ANG	K-55-8	Latitude	43° 10' S Longitude 147° 00' E
Surveyed	Amoco	Date	1985 Scale 1:25000
Drawn	S. Fowler	Date	1985 Drawing Nº M85-2302
Report	459		

